36

WHAT IS CLAIMED IS

1.   A liquid crystal display device including a reflection portion and a transmission portion in one pixel and employing a normally black mode, wherein

5   an orientation mode of the liquid crystal is a twist orientation, a polarization plate and one phase difference plate are provided on a viewing surface side, and a polarization plate is provided on a back surface side.

10   2.   A liquid crystal display as set forth in claim 1, wherein a ratio dt/dr between a gap dt of said transmission portion and a gap dr of said reflection portion satisfies a relationship of 1.7≤dt/dr≤2.05.

3.   A liquid crystal display as set forth in

15   claim 1, wherein the twist angle is 30 degrees to 60 degrees.

4.   A liquid crystal display as set forth in claim 2, wherein the twist angle is 30 degrees to 60 degrees.

20   5.   A liquid crystal display as set forth in claim 2, wherein the a phase difference value of said phase difference plate on the viewing surface side at a wavelength of 550 nm is 310 nm or more.

6.   A liquid crystal display as set forth in

25   claim 3, wherein the a phase difference value of said

phase difference plate on the viewing surface side at a wavelength of 550 nm is 310 nm or more.

7. A liquid crystal display as set forth in claim 4, wherein the a phase difference value of said

5 phase difference plate on the viewing surface side at a wavelength of 550 nm is 310 nm or more.

8. A liquid crystal display as set forth in claim 1, wherein, in said phase difference plate on the viewing surface side, when a refractive index of an

10 extension direction of the phase difference plate is nx, a refractive index of a perpendicular direction to the extension direction is ny, a refractive index in a normal direction with respect to the phase difference plate surface is nz, and a value represented by the following

15 equation is nz,

$$Nz = (nx-nz)/(nx-ny)$$

where, Nz satisfies the relationship of

$0 \leq Nz \leq 0.5$.

9. A liquid crystal display as set forth in

20 claim 2, wherein, in said phase difference plate on the viewing surface side, when a refractive index of an extension direction of the phase difference plate is nx, a refractive index of a perpendicular direction to the extension direction is ny, a refractive index in a normal

25 direction with respect to the phase difference plate

surface is nz, and a value represented by the following

equation is nz,

$$Nz = (nx-nz)/(nx-ny)$$

where, Nz satisfies the relationship of

5    $0 \leq Nz \leq 0.5$.

10.   A liquid crystal display as set forth in

claim 4, wherein, in said phase difference plate on the

viewing surface side, when a refractive index of an

extension direction of the phase difference plate is nx,

10   a refractive index of a perpendicular direction to the

extension direction is ny, a refractive index in a normal

direction with respect to the phase difference plate

surface is nz, and a value represented by the following

equation is nz,

15    $$Nz = (nx-nz)/(nx-ny)$$

where, Nz satisfies the relationship of

$0 \leq Nz \leq 0.5$.

11.   A liquid crystal display as set forth in

claim 1, wherein at least one side in the shape of the

20   boundary between said transmission portion and reflection

portion is a shape other than a straight line.

12.   A liquid crystal display as set forth in

claim 2, wherein at least one side in the shape of the

boundary between said transmission portion and reflection

25   portion is a shape other than a straight line.

13. A liquid crystal display as set forth in claim 4, wherein at least one side in the shape of the boundary between said transmission portion and reflection portion is a shape other than a straight line.

5   14. A liquid crystal display as set forth in claim 8, wherein at least one side in the shape of the boundary between said transmission portion and reflection portion is a shape other than a straight line.

15. A liquid crystal display as set forth in claim 9, wherein at least one side in the shape of the

10   claim 9, wherein at least one side in the shape of the boundary between said transmission portion and reflection portion is a shape other than a straight line.

16. A liquid crystal display as set forth in claim 10, wherein at least one side in the shape of the

15   boundary between said transmission portion and reflection portion is a shape other than a straight line.